

Reflection-less Low Pass Filter 5 - 684 MHz

Rev. V2

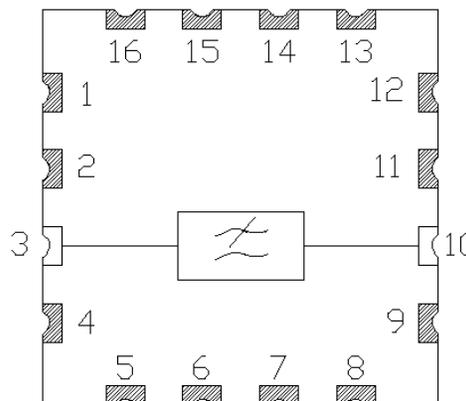
Features

- 75 Ω
- Surface Mount 18 mm device
- Low Insertion Loss to 684 MHz
- Matched to 1218 MHz
- RoHS Compliant and Pb free

Description

MAFL-011082 is a reflection less low pass filter with a pass band from 5 - 684 MHz with low insertion loss in the pass band and excellent matched return loss to 1218 MHz.

Functional Schematic



Ordering Information^{1,2}

Part Number	Package
MAFL-011082	300 piece reel
MAFL-011082-TB	Sample Board

1. Reference Application Note M513 for reel size information.
2. All sample boards include 5 loose parts.

Pin Configuration^{3,4}

Pin #	Function
1, 2, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16	Ground
3	Input Port
10	Output Port

3. MACOM recommends connecting unused package pins to ground.
4. The exposed pad centered on the package bottom must be connected to RF, DC and thermal ground.

Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$

Parameter	Test Conditions Frequency (MHz)	Units	Min	Typical	Max
Insertion Loss	5 - 684	dB	—	0.75	1.0
Filter Rejection	1000 1218	dB	22 35	24 45	—
Filter Input Port Return Loss	5 - 1218	dB	18	22	—

* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

Absolute Maximum Ratings^{5,6}

Parameter	Value
RF Power	250 mW
DC Current	30 mA
Operating & Storage Temperature	-40°C to +85°C

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- MACOM does not recommend sustained operation near these survivability limits.

Handling Procedures

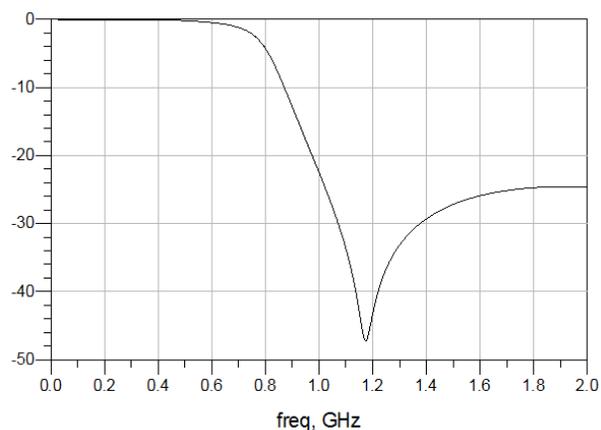
Please observe the following precautions to avoid damage:

Static Sensitivity

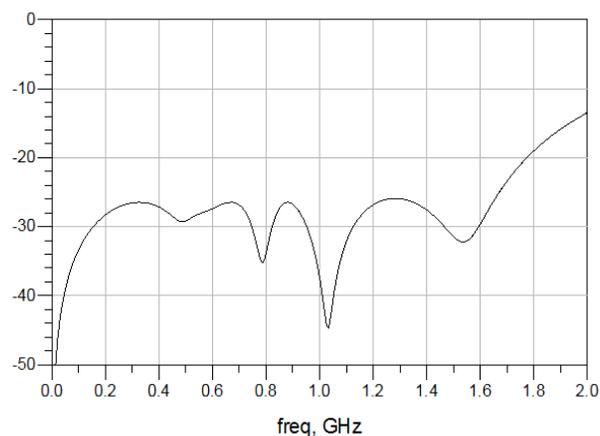
These electronic devices are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

Typical Performance Curves

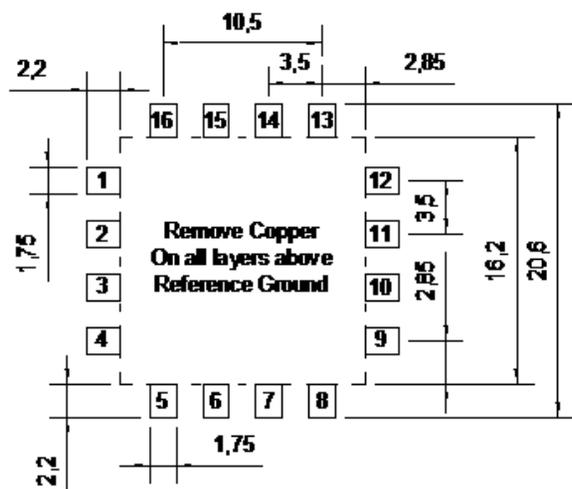
Low Pass Filter



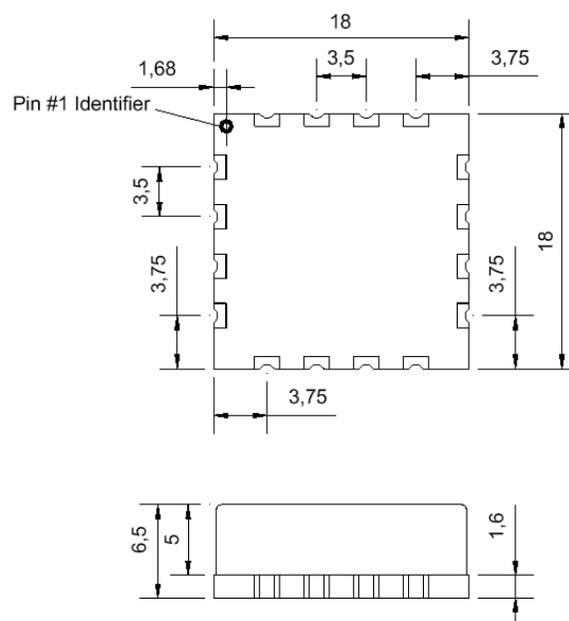
Input Port Return Loss



Recommended PCB Configuration

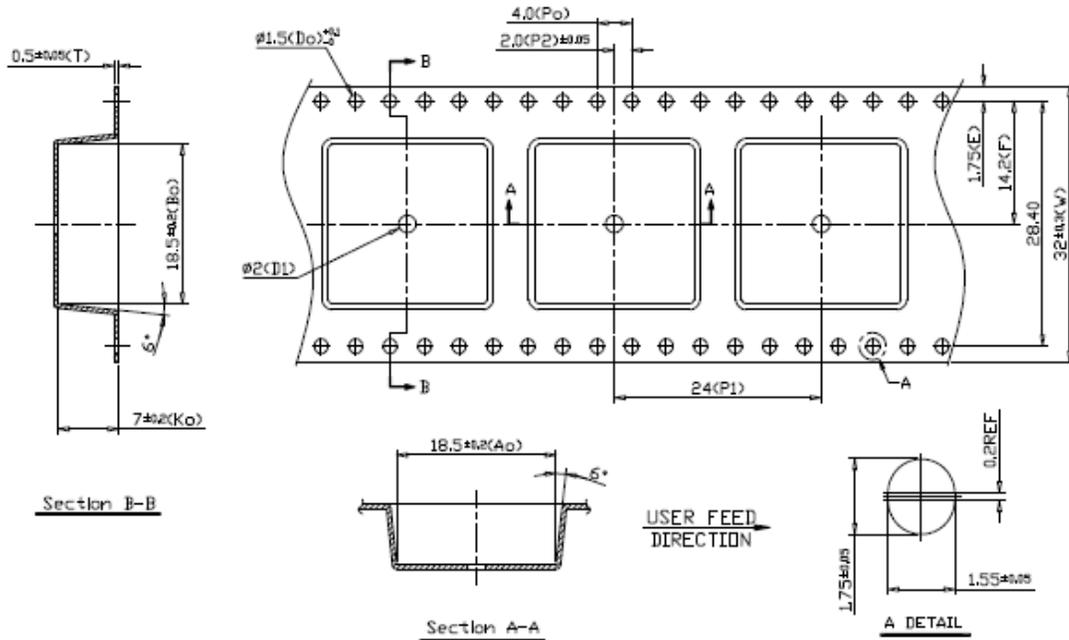


Filter Outline Drawing

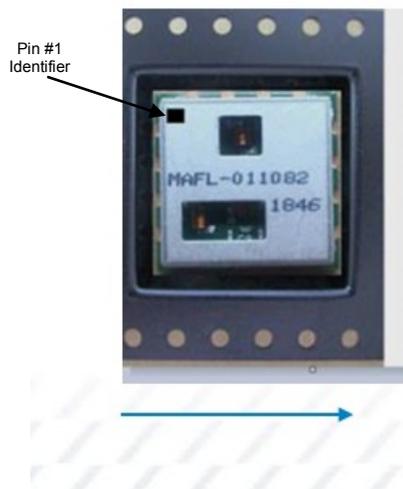


Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

Tape & Reel Information



Orientation



Dimensions

Parameter	Units	Value
Qty per reel	—	300
Reel Size	mm	330
Tape Width	mm	32.00
Pitch	mm	24.00
Ao	mm	18.5
Bo	mm	18.5
Ko	mm	7.0
Orientation	—	F30
Reference Application Note ANI-019 for orientation		

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